

REMARKS

This amendment is submitted as a full and complete response to the Final Office Action dated March 6, 2008. Reconsideration and allowance of the claims are requested.

Claims 1, 3-6, 9-10, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Zolnowsky* (U.S. Patent No. 5,826,081), *Browning* (U.S. Patent No. 6,633,897), and *Jones* (U.S. Patent No. 5,812,844). These rejections are respectfully traversed.

Independent claims 1 and 9 recite the limitations of (i) simultaneously rearranging threads in a single queue and (ii) ordering all requests from the hardware devices in the single queue. The single queue represents the order in which all threads will be serviced for all of the hardware devices. As stated in the paragraph [0004] of the background section of the present application, some prior art systems use two queues, where one queue is dedicated to high priority processes, and another queue is dedicated to address low priority processes in order to meet real-time processing constraints. As recited in the pending claims, the threads are simultaneously rearranged in the single queue.

In contrast to the claimed approach, *Zolnowsky* teaches using several queues to schedule operations. In particular, each one of the processors has a dedicated queue and a global dispatch (real time) queue is used for higher priority real time threads. *Zolnowsky* does not teach or suggest the limitation recited in amended claims 1 and 9 of simultaneously rearranging the order in which all threads will be serviced from the single queue. *Jones* also fails to teach or suggest simultaneously rearranging the order in which all threads will be serviced from the single queue. Therefore, the Examiner relies on *Browning* for these limitations.

In column 5, lines 8-11, *Browning* describes the preferred embodiment of the global queue as being "subdivided into 128 first-in-first-out (FIFO) queues, where there is a unique queue for each priority level." Rather than being a single queue, the global queue is actually made up of multiple queues, with a different queue for each priority level. Additionally, *Browning* does not teach or suggest that the threads are simultaneously rearranged in the global queue in an order in which the threads will be

served. Instead of rearranging the order of the threads in the global queue, the dispatcher taught by *Browning* selects a thread from the global queue for processing.

The Examiner also rejected claims 1-15, 17-18, and 23 under 35 U.S.C. 103(a) as being unpatentable over *Ramakrishnan* (U.S. Patent No. 6,085,215), *Jones*, and *Browning*. These rejections are respectfully traversed.

Ramakrishnan teaches using a round-robin scheduler to select each thread for execution from a real time domain and a general purpose domain. Nowhere does *Ramakrishnan* teach or suggest that threads are simultaneously rearranged in a single queue in an order in which the threads will be serviced. As previously explained, *Jones* and *Browning* also fail to teach or suggest that threads are simultaneously rearranged in the single queue in an order in which the threads will be serviced.

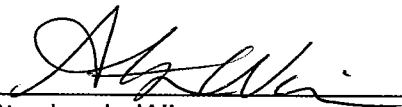
The other references cited by the Examiner fail to cure the deficiencies of *Zolnowsky*, *Browning*, *Ramakrishnan*, and *Jones* relative to claims 1 and 9. Therefore no combination of the cited references can render either claim 1 or claim 9 obvious. For these reasons, Applicant submits that claims 1 and 9 are in condition for allowance and respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of these claims. Since claims 2-8, 17-18, and 21-23 depend from allowable claim 1 and claims 10-15 depend from allowable claim 9, these claims also are in condition for allowance.

Conclusion

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed. Applicants reserve the right to subsequently take up prosecution of the claims as originally filed in this application in a continuation, a continuation-in-part and/or a divisional application. If the Examiner has any questions, please contact the Applicants' undersigned representative at the number provided below.

Respectfully submitted,



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